

# *METHOD AND APPARATUS TO GENERATE A CIRCULAR POLARIZED RF FIELD INDEPENDENT OF SUBJECT ASYMMETRY*

## **Abstract**

An RF coil assembly is presented that incorporates balun networks to eliminate standing waves from cables used to apply a voltage to multiple drive ports of the coil. Each drive port is driven by an applied voltage that is shifted 90 degrees in the tangential direction. Further, all drive ports are located on one end-ring of the coil, e.g. the superior end-ring. The inequality of the efficiency of the drive ports is reduced such that a substantially circular polarization in the volume of the coil is maintained. The present invention reduces asymmetrical loading by a patient as a result of patient asymmetry and patient contact with the opposite end-ring of the coil that normally negatively affects circular polarization and conventional coil configurations.